

AMERICAN FARMER.

RURAL ECONOMY, INTERNAL IMPROVEMENTS, PRICES CURRENT.

"O fortunatos nimium sua si bona norint
Agricolae." . . . VIRG.

VOL. I.

BALTIMORE, FRIDAY, JULY 30, 1849.

NUM. 18.

AGRICULTURE.

On the Management of the Dairy,

Particularly with respect to the Making and
Curing of Butter.

BY J. ANDERSON.

The *American Farmer*, we wish our subscribers to understand, is intended no less for their wives than for themselves. Though woman, the most graceful and lovely object in creation, has in this happy land, approached nearer than in any other country to that station of dignity and consequence, which gratitude will never fail to assign her, for the thousand blessings she dispenses around her; still we have often thought that her true importance in the scale of domestic society, is not so universally acknowledged as it deserves.

On the contrary, it has long been fashionable to rail unmeaningly at female extravagance, and to ascribe the ruin of families, to the imprudence and vain frivolities of wives and daughters—whereas, we verily believe, that where a family is brought by such means to disgrace and penury, hundreds are overwhelmed by the idleness, dissipation, and vicious habits of husbands and sons—yet, where one volume of rational instruction is written to guide, and fortify woman, in her peculiar sphere of duties, thousands have been published to enlighten vain boasting man, the self nominated "Lord of Creation," in every department of individual, social, and political action.

How long shall we consider frivolous novels, and love-sick ditties, as the only food adapted to the digestive powers of the female mind; and acting on this arbitrary and degrading presumption, bring about by our own treatment, that very debility of understanding, and insignificance of character, which we impiously ascribe to nature?

It shall ever be the aim and pleasure of the *American Farmer*, to pay respectful homage to woman's influence over our happiness, and by every means in our power to enlighten and strengthen her in the administration of the many endearing and useful offices, which it is exclusively her province to exercise: amongst these, not the least profitable, or pleasing to an industrious and notable house-wife, is the superintendence of the *Dairy*; but in this, as in many other cases, the husband fails in his duty. He often withholds the essential articles, without which, it is impossible for her to perform her part with satisfaction and success, and perhaps in few things, does the *Farmer* provide more inadequately, than in furnishing the means of a *cleanly and profitable Dairy*. We have known many men, to their scandal be it mentioned, with 500 acres of land, and numerous half clad and half fed slaves, buy their own butter for winter's use in their family.

Either their cows are of the most worthless breed, or they are, as is most generally the case, utterly unprovided with nourishing *winter food*—and even in summer, when milk is not wanting, their dairies are badly located, injudiciously constructed, and without one solitary vessel or convenience well adapted to the purpose. In Maryland, more especially we can say, the garden, the dairy, the poultry yard, and every thing within the range of the house-wife's management, are left to "shift for themselves." "My dear, the hands can't be taken off," is the usual reply, when he is reminded, that these things require attention; all things must give way to the *corn, wheat and tobacco*, which constitute, in his estimation, the chief goods of this life—until, he seats himself at the table; when nice butter, fine vegetables, and a good fowl, are sure to attract their full share of his regard.

The following observations on the management of the dairy and the making of butter, are the result of much and careful observation, and experiment. They are inserted here, that the *farmer's wife* may be made acquainted with some important particulars in the process of making butter, and that she may be enabled, when the husband finds fault on that score, to intimate to him, what it is necessary for him to provide, and without which, all her exertions must be labour in vain.—*Ed. Farmer.*

When a dairy is established, the undertaker ought to be fully acquainted with every circumstance respecting the manufacture both of butter and cheese; here it is only proposed to treat of the manufacture of butter. The first thing is to choose cows of a proper sort; among this class of animals, it is found by experience, that some kinds give milk of a thicker consistence and richer quality than others. In judging of the value of a cow, it ought rather to be the quantity and quality of the cream produced from the milk in a given time, than the quantity of the milk itself; this is a circumstance of more importance than is generally imagined. The small cows of the Alderney breed afford the richest milk hitherto known; but individual cows in every country, may be found, by a careful selection, that afford much richer milk than others; these, therefore, ought to be searched for with care, and their breed reared with attention, as being peculiarly valuable. In comparing the milk of two cows, to judge of their respective qualities, particular attention must be paid to the time that has elapsed since their calving. To make the cows give abundance of milk, and of a good quality, they must at all times have plenty of food. Grass is the best food yet known for this purpose, and that kind which springs up spontaneously on rich dry soils, is the best of all. If the cows are so much incommoded by the heat, as to be prevented from eating through the

day, they ought to be taken into cool shades for protection; where, after allowing them a proper time to ruminate, they should be supplied with abundance of green food, fresh cut for the purpose, and given them by hand, frequently, fresh and in small quantities, so as to induce them to eat it with pleasure.

Cows, if abundantly fed, should be milked three times a day, during the whole of the summer season, in the morning early, at noon, and in the evening, just before night fall. If cows are milked only twice in twenty-four hours, while they have abundance of succulent food, they will yield a much smaller quantity of milk in the same time, than if they be milked three times. Some attentive observers I have met with, think a cow in these circumstances, will give nearly as much milk at each time, if milked three times, as if they were milked only twice. In the choice of persons for milking the cows, great caution should be employed, for if all the milk be not thoroughly drawn from a cow when she is milked, a diminution of the quantity gradually takes place, and in a short time the cow becomes dry. In the management of a dairy, the following peculiarities respecting milk, ought very particularly to be attended to; some of them are, no doubt, known in part to attentive house-wives, but they have never been considered of so much importance as they deserve.

MAXIM I.

Of the milk that is drawn from any cow at one time, that which comes off at the first is always thinner, and of a much worse quality, than that which comes afterwards, and the richness goes on, continually increasing, to the very last drop that can be drawn from the udder at that time.

Few persons are ignorant that milk, which is taken from the cow last of all at milking, which in this country is called *stroakings*, (here *striplings*) is richer than the rest of the milk; but fewer still are aware of the greatness of the disproportion between the quality of the first and the last drawn milk from the same cow at one milking: from several accurate and important experiments, it appears, that the person who, by bad milking of his cows, loses but half a pint of the last milk that might be obtained, loses in fact, about as much cream as would be afforded by six or eight pints at the beginning, and loses besides, that part of the cream, which alone can give richness and high flavour to his butter.

MAXIM II.

If milk be put in a dish, and allowed to stand till it throws up cream, that portion which rises first to the surface, is richer in quality and greater in quantity, than what rises in a second equal portion of time, and the cream that rises in the second interval of time, is greater in quantity and richer in quality, than what rises in a third equal space of time, and so on, the cream decreases in

quantity, and declines in quality continually, as long as any rises to the surface.

MAXIM III.

Thick milk always throws up a smaller proportion of the cream it actually contains to the surface, than milk that is thinner, but that cream is of a richer quality; and if water be added to that thick milk, it will afford a considerably greater quantity of cream than it would have done, if allowed to remain pure; but its quality is at the same time greatly debased.

MAXIM IV.

Milk, which is put into a bucket or other proper vessel, and carried in it to any considerable distance, so as to be much agitated, and in part cooled before it be put into the milk pans to settle for cream, never throws up so much nor so rich cream, as if the same milk had been put into the milk-pans directly after it was milked.

In this case, it is believed, that the loss of cream will be in proportion to the time that has elapsed, and the agitation it has sustained, after having been drawn from the cow.

From the above facts, the following corollaries seem to be clearly deducible.

1. It is of importance, that the cows should be always milked as near the dairy as possible, and it must be of great advantage in a dairy farm, to have the principal grass fields as near the dairy as possible.

2. The practice of putting the milk of all the cows of a large dairy into one vessel, as it is milked, there to remain till the whole milking be finished, before any part of it be put into milk-pans, seems to be highly injudicious, not only on account of the loss that is sustained by agitation and cooling, but also, as it prevents the owner of the dairy from distinguishing the good from the bad cow's milk; a better practice, therefore, would be, to have the milk drawn from each cow separately, put into the creaming pans as soon as it is milked, without being mixed with any other. Thus would the careful farmer be able, on all occasions, to observe the particular quality of each individual cow's milk, as well as its quantity, and to know with precision, which of his cows it was his interest to dispose of, and which he ought to keep and breed from.

3. If it be intended to make butter of a very fine quality, it would be advisable in all cases, to keep the milk, that is first drawn, separate from that which comes last, as it is obvious, that if this be not done, the quality of the butter will be greatly debased, without much augmenting its quantity. It is also obvious, that the quality of the butter will be improved in proportion to the smallness of the proportion of the last drawn milk that is retained; so that those who wish to be singularly nice in this respect, will only consume a very small proportion of the last drawn milk.

4. If the quality of the butter be the chief object attended to, it will be necessary not only to separate the first from the last drawn milk, but also to take nothing but the cream that is first separated from the best milk, as it is this first rising cream alone, that is of the prime quality: the remainder of the milk which will be still sweet, may be either employed for the purpose of making sweet milk cheeses, or it may be al-

lowed to stand, to throw up cream for making butter of an inferior quality.

5. From the above facts we learn, that butter of the very best possible quality can only be obtained from a dairy of considerable extent when judiciously managed.

6. From these premises, we are led to draw a conclusion, different from the opinion that is commonly entertained on this subject, viz: that it seems probable that the very best butter can only be with economy made in those dairies, where the manufacture of cheese is the principal object; as but few persons would be willing to purchase the very best butter at a price to indemnify the farmer for his trouble.

I am satisfied from experience and attentive observation, that if in general about the first drawn half of the milk be separated at each milking, and the remainder only be set up for producing cream, and if that milk be allowed to stand to throw up the whole of its cream, even till it begins sensibly to taste sourish, and if that cream be afterwards carefully managed, the butter thus obtained, will be of a quality greatly superior to what can usually be obtained at market, and its quantity not considerably less than if the whole of the milk had been treated alike.

No dairy can be managed with profit, unless a place properly adapted for keeping the milk, and for carrying on the different operations of the dairy, be first provided.* The necessary requisites of a good milk house are, that it be cool in summer, and warm in the winter, so as to preserve a temperature nearly the same, throughout the whole year, and that it be dry, so as to admit of being kept clean and sweet at all times.

From the trials I have made, I have reason to believe, that when the heat is from fifty to fifty-five degrees on Fahrenheit's thermometer, the separation of the cream from the milk, which is the most important operation of the dairy, goes forward with the greatest regularity. When the heat exceeds sixty degrees, the operations become difficult and dangerous, and when it falls below the fortieth degree, they can scarcely be carried forward with any degree of economy, or propriety.

In winter, should the cold become too great, it might be occasionally dispelled, by placing a barrel full of hot water closely bunged up, upon the table, to remain till cooled. This I prefer to any kind of chaffing-dish with burning embers.

The utensils of the dairy must in general be made of wood. As the acid of milk readily dissolves lead, with which the common earthen vessels are glazed, such vessels should be banished from the dairy.

The creaming dishes, (for so I call the vessels in which the milk is placed for throwing up the cream) when properly cleaned, sweet, and cool, are to be filled with the milk as soon after it is drawn from the cow as possible, having been first strained carefully through a close strainer.

These dishes should never exceed three inches in depth, whatever be their other dimensions. As soon as they are filled, they are to be placed on the shelves in the milk house, perfectly un-

* The author here gives a very particular description of the best contrived milk house, or dairy. Vide Bath papers.

disturbed till it be judged expedient to separate the cream from them.

In a moderately warm temperature of the air, if very fine butter be intended, it should not be allowed to stand more than six or eight hours; for ordinary good butter, it may safely stand ten or twelve, or more.

It is of great importance to the success of the dairy, that the *skimming* be well performed, for if any part of the cream be left, the quantity of the butter will be diminished; and if any part of the milk be taken, its quality will be debased.*

When the cream is obtained, it ought immediately to be put into a vessel by itself, there to be kept till a proper quantity be collected for being made into butter. And no vessel can be better adapted to that purpose, than a firm neat made wooden barrel, in size proportioned to the dairy, open at one end, with a lid exactly fitted to close it. In the under part of this vessel, close to the bottom, should be placed a cock and spigot, for drawing off any thin serous part of the milk that may chance to be there generated; for if this is allowed to remain, it injures the cream, and greatly diminishes the richness of the quality of the butter; the inside of the opening should be covered with a bit of gauze netting, to keep back the cream while the serum is allowed to pass, and the barrel should be inclined a little forward, to allow the whole to run off.

The separation of butter from cream, only takes place after the cream has attained a certain degree of acidity. The judicious farmer will therefore allow his cream to remain in the vessel until it has acquired that proper degree of acidity that fits it for being made into butter with great ease, by a very moderate degree of agitation, and by which process only, very fine butter ever can be obtained. How long cream may be thus kept in our climate, without rendering the butter made from it of a bad quality, I cannot say; but it may be kept good for a much longer time than is generally suspected, even a great many weeks. It is certain, that cream which has been kept three or four days in summer, is in an excellent condition for being made into butter; from three days to seven, may in general be found to be the best time for keeping cream before churning.

I prefer the old fashioned upright *churn*, having a long handle, with a foot to it perforated with holes as it admits of being better cleaned, and of having the butter more easily separated from the milk than any others.

Where the cream has been duly prepared, the process of butter making is very easy; there is however more nicety required, than most persons seem to be aware of; a few *hasty, irregular strokes*, may render the butter of scarcely any value, which, but for this circumstance, would have been of the finest quality. The butter when made, must be immediately separated from the milk, and being put into a clean dish, the inside of which, if of wood, should be well rubbed with common salt. The butter should be pressed and

* The cream should be separated from the edges of the dish, by means of an ivory bladed knife, then carefully drawn towards one side by a skimming dish, and then taken off with great nicety.

worked with a flat wooden ladle, having a short handle, so as to force out all the milk that was lodged in the cavities of the mass. The beating up of the butter by the hand is an indelicate and barbarous practice. If the milk be not entirely taken away, the butter will infallibly spoil in a short time, and if it be much washed, it will become tough and gluey. Some persons employ cold water in this operation; but this practice is not only useless, but also pernicious, because the quality of the butter is thus debased in an astonishing manner. In every part of the foregoing process it is of the utmost importance, that the vessels and every thing else about the dairy, be kept perfectly sweet and clean.

Wooden vessels are the most proper for containing salted butter. Oak is the best wood for the bottom and staves. Broad split hoops are to be preferred to all others.

Iron hoops should be rejected, as the rust of them will in time sink through the wood, and injure the colour of the butter. To season a new vessel for the reception of salted butter, requires great care: it should be filled frequently with scalding water, allowing it to remain till it slowly cools. After the butter has been cleaned from the milk, as before directed, it is ready for being salted. Let the vessels be rendered as clean and as sweet as possible, and be rubbed all over in the inside with common salt; and let a little melted butter be run into the cavity between the bottom and the sides at their joining, so as to fill it, and make it every where flush with the bottom and sides: it is then fit to receive the butter. Common salt is almost the only substance hitherto employed for preserving butter. I have found by experience, that the following composition is in many respects preferable to it, as it not only preserves the butter more effectually from any taint of rancidity, but makes it look better, and taste sweeter and more marrowy, than if the same butter had been cured with common salt alone. The composition is as follows:

Take of sugar one part, of nitre (salt petre) one part, and of the best Spanish great salt, two parts; beat the whole into a fine powder, mix them well together, and put them by for use.

Of this composition, one ounce should be put to every sixteen ounces of butter: mix this salt thoroughly with the butter, as soon as it has been freed from the milk, and put it, without loss of time, into the vessel prepared to receive it, pressing it so close as to leave no air holes, or any kind of cavities within it; smooth the surface, and if you expect it will be more than two days before you add more, cover it close up with a piece of clean linen and over that a piece of fine linen that has been dipped in melted butter, fit this exactly to the edges of the vessel all round, so as to exclude the air as much as possible, without the assistance of any watery brine. When more butter is to be added, remove the coverings, and let the butter be applied close above the former, pressing it down and smoothing it as before, and so on till the vessel is full. When full, let the two covers be spread over it with the greatest care, and let a little melted butter be poured all round the edges so as to fill up every cranny, and effectually exclude the air. A little salt may then be strewed over the whole, and the cover firmly fixed down, to

remain closely shut till opened for use. If this be carefully done, the butter may be kept perfectly sound in this climate for many years.*

It must be remarked, that butter cured in this manner, does not taste well till it has stood at least a fortnight after being salted. After that period is elapsed, it eats with a rich marrowy taste that no other butter ever acquires. Butter thus cured, will go well to the East or West Indies.

Butter, in its natural state, contains a considerable proportion of mucus matter, which is more highly putrescible than the pure oily parts of the butter. When it is intended to be exposed to the heat of warm climates, it ought to be freed from that mucilage before it be cured and packed up. To do this, let it be put into a vessel of a proper shape, which should be immersed in another containing water. Let the water be gradually heated till the butter be thoroughly melted: let it continue in that state for some time, and allow it to settle: the mucous part will fall to the bottom, and the pure oil swim at the top. When it cools, it becomes opaque and paler than the original butter, and of a firmer consistence.—When this refined butter is become a little stiff, and while it is still somewhat soft, the pure part should be separated from the dregs, and then salted and packed up, in the same way as is before directed.

Those who wish to see the subject more fully treated, are referred to the original.

* The Epping butter is called the best in England. The farmers make use of a very innocent colouring matter for their winter and early spring butter, which is the juice of carrots. They take clean and fresh carrots, and grate them fine, and squeeze out the juice through a coarse cloth and mix it with their cream. This gives their butter as fine an appearance as the best June butter, without communicating any taste or flavour.

FROM THE ALBANY ARGUS.

Treatise on Agriculture.

SECTION II.

On the actual State of Agriculture in Europe.

[Continued from No. 10, page 75.]

3d. 'The countries,' says Arthur Young, 'the most rich and flourishing of Europe, in proportion to their extent, are probably Piedmont and the Milanese. We there meet all the signs of prosperity—an active and well conditioned population, great exportations, considerable interior consumptions, superb roads, many opulent towns, a ready and abundant circulation, the interest of money low, the price of labour high; in one word it is impossible to cite a single fact that shows that Manchester, Birmingham, Rouen, and Lyons, are in a condition equally prosperous, as the whole of these Dutchies.' Their population is stated at "1,114,000, and the territory at little more than two millions of arpens, (acres.) Wheat, rye, Indian corn, flax and hemp, the vine and the olive, the caper and the cotton tree, with all kinds of garden fruits and vegetables, are cultivated here: The soil knows no repose, and much of it yields annually and uniformly

two crops of grain, or three of grass." (1) These are the miracles of Irrigation, not a drop of water is lost. Besides the permanent supplies furnished from lakes, ponds, rivers, creeks and springs, even the winter torrent, and summer shower, are every where intercepted by drains, and led to reservoirs, whence they are distributed at will to the neighbouring grounds.

In 1770, an agricultural school was established at Milan, consisting of 220 boys, who were instructed in theoretical and practical husbandry. This institution has escaped the notice of travellers; and we are unable to say whether it has or has not, fulfilled the intention of its projectors.

4. Switzerland has about 1444 square leagues of surface, and presents an assemblage of mountains, one rising above another, until the summits are lost in masses of snow and ice, which never melt. This short description sufficiently indicates the character of both the soil and the climate; yet unpropitious as these are, we find a population of 1242 inhabitants to each square league! "This is perhaps the country of the world, which presents the most happy effects of an industry always active and persevering. The traveller, who climbs her mountains, is struck with admiration when he beholds vineyards and rich pastures in those places which before appeared naked and barren rocks. The traces of the plough are perceived on the borders of precipices where the most savage animals do not pass without danger; in one word, the inhabitants appear to have conquered all obstacles, whether arising from soil, position or climate, and to have drawn abundance from a territory, condemned by nature to perpetual sterility." (2)

5. The classical reader will remember, that Spain was the garden of the Hesperides of the Roman writers; by which was meant the combinations of a fine climate, a rich soil and an active and intelligent agriculture. To this state of things, even the empire of the Goths was not fatal, (3) and that of the Moors rendered it still more distinguished. In their hands, the plains of Valentia were cultivated throughout, with the utmost care and skill; and where their wheels reservoirs, and drains of irrigation, yet remain, the soil continues to yield the richest and most abundant products. In Catalonia, Navarre, Galitia and the Austurias, many species of the ancient agriculture are yet in vigour, because "the leases are long, and the landlord cannot capriciously violate them." The same causes are followed by the same effects, in the three districts of Biscaya, Guiposcoa and Alava. "In running over these, every thing one finds is animated by the presence of liberty and industry; nothing can be more charming than the coasts, nothing more at-

(1) Geographic, Matématique, &c. Article Italie.

(2) Idem. Article Helvetia.

(3) It appears from Varro *Dere rustica* and the letters of Cassiodorus, that the Goths introduced into Spain the subterranean granaries, called *Silos*, and the art of irrigation. The former are now exclusively used in Tuscany, and Cato's precept, "Pranta irrigua," &c. shows whence their knowledge of the latter was derived.

tractive than the culture of valleys.—Through-out the thirty leagues that separate Badassod from Mitoria, every quarter of an hour we discover some well built village, or comfortable cottage." (4)

How different is the aspect of the other provinces! In these, not more than two thirds of the earth are cultivated; and "it is not uncommon to travel eight and ten leagues together, without finding a trace of human industry. In the district of Badejoz alone, is a desert of twenty-six leagues in length and twelve in breadth." (5) Ten of the fourteen leagues that traverse the Duchy of Medina Sidonia, consist altogether of pasturage. There is no where a vestige of man; not an orchard, not a garden, not a ditch, not a cottage to be seen! The great proprietor appears to reign like the lion in the desert, repulsing by his roaring all who would approach him. But instead of human colonies, we encounter troops of horned cattle and of *mares*, wandering, self-directed, over plains to which the eye can discover no boundary or barrier, and which brings to one's recollection the days when the beasts shared with man the empire of the earth." (6)

"Even when the plough is used, it is little more than a great knife fastened to a stick, that just scratches the surface. The grain is threshed by horses, or mules, driven over it, or by means of a plank, studded with nails or flint stones and drawn across it." (7) With even this miserable culture, the land in Andalusia yields considerable crops; yet are the inhabitants too lazy or too few to gather them together. (8) This is done by Galiegos, who are the labourers of Spain." We need scarcely remark, that in a state of agriculture like this, the peasantry cannot be either well fed or well clothed. "The mountaineers live principally upon roasted acorns and goat's milk, and those of the plain (from Barcelona to Malaga) on bread steeped with oil, and occasionally seasoned with vinegar." (9)

It is wide of our object to examine the causes of the degradation of character, which marks the agriculture of Spain. Well informed writers have ascribed it to the expulsion of the Moors and Jews, to the weight of taxes and imposts, to the *mesta* or common right of pasturage, to the

(4) Burgoing's Modern Spain, vol. i.

(5) Corde's Hineraira de l'Espagne, vol. iv. p. 30.

(6) Burgoing. Spain has been long renowned for its horses.

The Romans, in settling their pedigree and illustrating their swiftness, called them 'the children of the winds.'

(7, 8, 9) Swinburne's Travels, vol. i. A Spanish peasant, who had earned or begged enough for the wants of the day, will refuse to earn more, even by running an errand. Striking as this fact is, it does not so well illustrate Spanish indolence as the following anecdote from the same pen. In the great sedition at Madrid, which ended in the defeat of the king, and the disgrace of his minister, (Marquis des Squillas) and in its most fervid moments, both parties retired about dinner time to take their *nap* or *meridiana*, after which they returned to the combat with new vigour and enraged fury. If *habits* can thus control the *passions*, to what important uses might not a wise legislation turn them?

discovery of America and its consequences, to the effect of climate and the ill judged charity of bishops and convents, but principally to the great *manorial grants and unequal division* of the soil, which followed the conquest. "We often find six, eight, ten, and even fifteen leagues of extent belonging to one master. The nobility and clergy possess nearly the whole country. One third of Spain belongs to the families of Medina, Celi, D'Alva, De l'Infantado, D'Aceda, and to the archbishops, bishops and chapters of Toledo, Compostella, Valencia, Seville and Murcia. A great proportion of these lands remain untitled and untenanted, and those which are let in *Cortijo* or farms, are double or treble the quantity that can be occupied in tillage." (10)

6. The agriculture of Portugal, has been subjected to the same evils as that of Spain, to which may be superadded, her connexion with Great Britain; under whose policy she has become a raiser of fruit instead of grain.

7. France is probably the country of Europe, which most unites the great desiderata of an extended and profitable agriculture, fertility of soil, mildness of climate, a dense population, an enlightened government, and facility of exportation. Within her ancient limits, she boasts of a surface of more than one hundred and fifteen millions of arpens, and a population of twenty-two millions of inhabitants. The following tables will show, in a compressed form, the nature of her soil, and the uses to which it is put: (11)

Geological Table.

	Arpens, or Acres.
Alluvial and other rich soil,	26,59,340
Chaiky do	13,268,921
Gravelly do	3,261,826
Stony do	18,128,660
Sandy do	7,553,956
Substratum of clay with a slight covering of sand—called <i>landes</i> ,	21,879,120
Granitic and other mountains,	25,261,946

Agricultural Table.

Arable land,	63,600,000
Vineyards,	4,764,960
Woods,	15,931,850
Natural meadows,	5,464,800
Artificial meadows,	6,332,100
Lakes, marshes, wastes,	19,400,049

Total, 115,493,758

From the average of a number of statistical tables made by the Abbe D'Expillyt, and others, it appears, that in 1777, the agriculture of France was sufficient for the subsistence of its inhabitants, and had a surplus to spare; (12) and though it be universally admitted that her condition in this respect, is not less prosperous now than it was then, (13) still it cannot be dissembled that her husbandry has many defects.

(10) Le Borde's Heneraire D'Espagne, vol. i.

(11) See Geographique, &c. vol. vi. Article France, p. 13, and Young's tour through France.

(12) The products of agricultural labour, were, in these tables, stated at 114,552,000 L. T. Those of manufacturing labour at 128,015,000.

(13) The effects of the revolution of 1789 on agriculture are no longer doubtful. The suppression of *tythes*—of the *exclusive privilege*—of the *chace*—of every species of *corvee* (labour per-

1. A supposed resemblance between the earth and animals, gave rise to *fallows*; because men and horses required repose after labour, it was supposed that after *cropping*, the earth also required it. Faithful to this absurd analogy, the French landlord binds down his tenant by lease, not to crop the soil more than *three years in four*, which in effect is to consign to barrenness or weeds, one fourth of the whole arable land of France, yearly!

2. There is not a sufficiently fixed, or steady proportion, between *arable* and *pasture* land. The production of grain is the great object of culture—often with too little regard to the nature of the soil, and generally without any of its improvement. "Where pasturage is scanty, where natural meadows are bad, where artificial are rare, and root husbandry little extended, cattle cannot be either numerous or well conditioned; and as without these there can be no manure, so without manure, there can be no abundance." (14)

3. The land is generally worked by *farmers*, hired for that purpose, or by *renters on short leases*; which in neither case betters the condition of the soil; the one having no interest in improvements, and the other too small a one to justify any expense in making them.

4. A good rotation system, adapted to the soil and climate, is not absolutely unknown, and may be found even in whole districts (as in French Flanders) but much too rarely. We have seen wheat and fallows alternately, for years; and wheat, rye, hemp, and rye, and many others equally ridiculous.

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and a few of my neighbours for the two last years, a period perhaps not sufficiently long to test conclusively its character, in as much as a contrariety of opinion exists amongst those, who have grown it. This in some degree may be the result of prejudice, and failures may have occurred from many causes, not fairly chargeable to the wheat; the latter I am inclined to believe, in many instances, the fact; for where I have seeded it under favourable circumstances, the result has been satisfactory. In the fall of 1817, I seeded the Lawler Wheat, on several farms, on corn ground and clover lay, on poor and rich land, and to test its qualities, sowed what is called here, the old Virginia white wheat, adjoining it, even in the same corn land. The white wheat, generally with me was that season very much injured by spring fly. The Lawler only in one instance, on rather a light piece of land which had been in corn, and then I judged the crop to have been lessened one half; the Virginia white wheat adjoining it, and seeded the same day, did not produce the seed sown; from 23 acres of clover-lay sowed that year with Lawler Wheat, between the 28th September, and fifth of October, I made by actual measurement, (not by estimation, which is too often the mode of ascertaining grain crops,) 628 bushels, weighing 63 pounds. The result of 1817, induced me to seed nearly my whole crop with Lawler Wheat, in 1818. My harvest is secured, and a good one as to straw, in every instance, where the land was, as farmers term it, in good heart, good order, and seeded at a proper season. I have one field of 90 acres, which will produce, estimating from the straw about 20 bushels to the acre, but the wheat generally, has filled badly, in consequence of the dry weather. These are the facts resulting from two year's experience. Those who feel an interest will draw their own conclusion, but it may be necessary to add, that little injury was done by fly in my neighbourhood this season; it made its appearance early in May, in the Virginia white wheat, and some little in the Lawler wheat, but providentially neither were materially injured. The Lawler wheat in appearance, resembles the Virginia white wheat, but in my opinion it will not produce as well from the straw. The bars of wheat in the head are not as close, nor generally as well filled with grain, but that it possesses the quality of resisting the fly in a much greater degree than any other wheat known to us, is satisfactorily evinced by the experience of most of my neighbours and myself, for the last two years; what this quality is, yet remains conjectural. That its losing its lower blades, at an earlier period than other wheat, and consequently depriving the fly of the usual place of deposit and protection, as is supposed by some persons, I should, from my observations, pronounce erroneous; for although I have sometimes observed the lower blades to decline very early in the season, I do not consider it by any means a characteristic of the wheat. I have myself, formed no opinion on the subject, or even conjecture, which I deem worthy of communication. It is a few days later in ripening than the Virginia white wheat, provided the latter escapes the fly, but in 1818, the Lawler wheat ripened before the white wheat, in consequence of its being checked in the early spring

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It will at all times afford me much pleasure to make such communications for the Farmer, as my experience may warrant, my agricultural speculations must be reserved for the amusement of myself and a small circle of friends, but of these you will no doubt receive an abundant crop, and if you can succeed, without giving offence, in excluding from your now useful paper, the vagaries of theorists and agricultural empirics, you will deserve welof your country, and do honour to yourself; for unfortunately for the cause of agriculture, most publications on the subject, abound with the wild notions of scribblers, who are as ignorant in theory as deficient in practice, hence with those without experience, who read for the purpose of information, erroneous opinions are as apt to be formed as correct ones, and practices are often commenced in consequence; which eventuate in loss and disappointment. Permit me in conclusion to remark, that the FARMER, so far, is the best agricultural compilation, in my humble opinion, that I have ever seen, and deserves the patronage of the public. Truly yours,

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Hints for American Tourists, in Foreign Countries.

The order given by the Secretary of the Treasury to our Consuls in foreign parts, to send home, when they can, all rare and valuable grain and grass seeds, manifests an interest in the cause of agriculture, which eminently entitles him to the thanks of the public. It is difficult to calculate the benefit which may be derived to our country, if the order should be executed in the spirit that dictated it. We trust it will be so executed. A great variety of seed, has already, as we notice, been received at New York, that great emporium of every thing which can enlighten, improve and adorn our rising country; but as no funds are appropriated for the purposes pointed out in the Secretary's instructions in this matter, they must necessarily fall far short of the full accomplishment of his wishes. While Congress and State authorities are providing for so many corporate and other interests, it is high time they had bestowed a little more attention on the immediate interests of agriculture, and of internal improvements in general. We should be glad to see the secretary of the navy follow the example of his colleague in the treasury department. Would he not do an act of signal service by issuing similar orders to the commanders of ALL OUR SHIPS ON FOREIGN STATIONS? Let them be requested to bring home the best individuals of rare families in the animal as well as vegetable kingdom. Indeed we have often thought it would result in great advantages, if the navy department could have the means of providing a small select library, for the use of all our men of war—to consist chiefly of voyages and works on natural history. The library being once furnished,

tractive than the culture of valleys.—Through-out the thirty leagues that separate Bedassod from Mitoria, every quarter of an hour we discover some well built village, or comfortable cottage." (4)

How different is the aspect of the other provinces! In these, not more than two thirds of the earth are cultivated; and "it is not uncommon to travel eight and ten leagues together, without finding a trace of human industry. In the district of Badejoz alone, is a desert of twenty-six leagues in length and twelve in breadth." (5) Ten of the fourteen leagues that traverse the Duchy of Medina Sidonia, consist altogether of pasturage. There is no where a vestige of man; not an orchard, not a garden, not a ditch, not a cottage to be seen! The great proprietor appears to reign like the lion in the desert, repulsing by his roaring all who would approach him. But instead of human colonies, we encounter troops of horned cattle and of mares, wandering, self-directed, over plains to which the eye can discover no boundary or barrier, and which brings to one's recollection the days when the beasts shared with man the empire of the earth" (6)

"Even when the plough is used, it is little more than a great knife fastened to a stick, that just scratches the surface. The grain is threshed by horses, or mules, driven over it, or by means of a plank, studded with nails or flint stones and drawn across it." (7) With even this miserable culture, the land in Andalusia yields considerable crops; yet are the inhabitants too lazy or too few to gather them together. (8) This is done by Galiegos, who are the labourers of Spain." We need scarcely remark, that in a state of agriculture like this, the peasantry cannot be either well fed or well clothed. "The mountaineers live principally upon roasted acorns and goat's milk, and those of the plain (from Barcelona to Malaga) on bread steeped with oil, and occasionally seasoned with vinegar." (9)

It is wide of our object to examine the causes of the degradation of character, which marks the agriculture of Spain. Well informed writers have ascribed it to the expulsion of the Moors and Jews, to the weight of taxes and imposts, to the *mesta* or common right of pasturage, to the

(4) Burgoing's Modern Spain, vol. i.

(5) Corde's Hineraira de l'Espagne, vol. iv. p. 30.

(6) Burgoing. Spain has been long renowned for its horses.

The Romans, in settling their pedigree and illustrating their swiftness, called them 'the children of the winds.'

(7, 8, 9) Swinburne's Travels, vol. i. A Spanish peasant, who had earned or begged enough for the wants of the day, will refuse to earn more, even by running an errand. Striking as this fact is, it does not so well illustrate Spanish indolence as the following anecdote from the same pen. In the great sedition at Madrid, which ended in the defeat of the king, and the disgrace of his minister, (Marquis des Squillas) and in its most fervid moments, both parties retired about dinner time to take their *nap* or *meridiana*, after which they returned to the combat with new vigour and enraged fury. If *habits* can thus control the *passions*, to what important uses might not a wise legislation turn them?

discovery of America and its consequences, to the effect of climate and the ill judged charity of bishops and convents, but principally to the great *manorial grants and unequal division* of the soil, which followed the conquest. "We often find six, eight, ten, and even fifteen leagues of extent belonging to one master. The nobility and clergy possess nearly the whole country. One third of Spain belongs to the families of Medina, Celi, D'Alva, De l'Infantado, D'Aceda, and to the archbishops, bishops and chapters of Toledo, Compostella, Valentia, Seville and Murcia. A great proportion of these lands remain untitled and untenanted, and those which are let in *Cor-tijo* or farms, are double or treble the quantity that can be occupied in tillage." (10)

6. The agriculture of Portugal, has been subjected to the same evils as that of Spain, to which may be superadded, her connexion with Great Britain; under whose policy she has become a raiser of fruit instead of grain.

7. France is probably the country of Europe, which most unites the great desiderata of an extended and profitable agriculture, fertility of soil, mildness of climate, a dense population, an enlightened government, and facility of exportation. Within her ancient limits, she boasts of a surface of more than one hundred and fifteen millions of arpens, and a population of twenty-two millions of inhabitants. The following tables will show, in a compressed form, the nature of her soil, and the uses to which it is put: (11)

Geological Table.

	Arpens, or Acres.
Alluvial and other rich soil,	26,59,340
Chalky do	13,268,921
Gravelly do	3,261,826
Stony do	18,128,660
Sandy do	7,553,956
Substratum of clay with a slight covering of sand—called <i>landes</i> ,	21,879,120
Granitic and other mountains,	25,261,946

Agricultural Table.

Arable land,	63,600,000
Vineyards,	4,764,960
Woods,	15,931,850
Natural meadows,	5,464,800
Artificial meadows,	6,332,100
Lakes, marshes, wastes,	19,400,049
Total,	115,493,758

From the average of a number of statistical tables made by the Abbe D'Expillyt, and others, it appears, that in 1777, the agriculture of France was sufficient for the subsistence of its inhabitants, and had a surplus to spare; (12) and though it be universally admitted that her condition in this respect, is not less prosperous now than it was then, (13) still it cannot be dissembled that her husbandry has many defects.

(10) Le Borde's Heneraire D'Espagne, vol. i.

(11) See Geographique, &c. vol. vi. Article France, p. 13, and Young's tour through France.

(12) The products of agricultural labour, were, in these tables, stated at 114,552,000 L. T. Those of manufacturing labour at 128,015,000.

(13) The effects of the revolution of 1789 on agriculture are no longer doubtful. The suppression of *tythes*—of the *exclusive privilege*—of the *chace*—of every species of *corvee* (labour per-

1. A supposed resemblance between the earth and animals, gave rise to *fallows*; because men and horses required repose after labour, it was supposed that after *cropping*, the earth also required it. Faithful to this absurd analogy, the French landlord binds down his tenant by lease, not to crop the soil more than *three years in four*, which in effect is to consign to barrenness or weeds, one fourth of the whole arable land of France, yearly!

2. There is not a sufficiently fixed, or steady proportion, between *arable* and *pasture* land. The production of grain is the great object of culture—often with too little regard to the nature of the soil, and generally without any of its improvement. "Where pasturage is scanty, where natural meadows are bad, where artificial are rare, and root husbandry little extended, cattle cannot be either numerous or well conditioned; and as without these there can be no manure, so without manure, there can be no abundance." (14)

3. The land is generally worked by *farmers*, hired for that purpose, or by *renters on short leases*; which in neither case betters the condition of the soil; the one having no interest in improvements, and the other too small a one to justify any expense in making them.

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Burning likewise renders clay less coherent; and in this way greatly improves their texture,

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it might be confided to the care of the chaplain or purser, who should be responsible for its safe keeping, and it might be perpetuated by a small proportionate contribution from each officer, according to his month's pay. But we merely throw out the idea at present, intending to enlarge on it hereafter.

Several of our officers and public functionaries abroad, have manifested a very becoming and honourable zeal for procuring such things as might serve to give additional variety and profit to American Agriculture; and our object now is, to throw out hastily, some mere hints which may aid those who have it in their power to serve their country in this way.

These hints will consist chiefly of extracts to point out the best manner of preserving and transporting seeds, plants and quadrupeds, and the particulars which ought to be noted in relation to them, as connected with their natural history—and first as to *Seed*.

In procuring the seeds of foreign plants, care should be taken that they are perfectly dry, they should be packed in coarse brown paper, with but few seeds in each parcel, and the different parcels stowed into small tin boxes or canisters, the lids or covers of which should be soldered or cemented on, the more effectually to avoid the attacks of insects, and to exclude the air; such kinds of seeds as are incased in hard shells, do not require these precautions but the less any of them are exposed to the air, the more probability there will be of their vegetating. Various experiments have been made of substances to pack seeds in, as Sugar, Raisins, enveloping the seeds in warm wax, packing them in cerate papers, &c.; but the grand secret is to procure them sound and dry, and to pack them in such a manner as to exclude fresh air, which eventually dries up their juices; and what is of equal consequence, is, that the seeds be planted as soon as each parcel is opened, as one hour's exposure is, in many cases, sufficient to destroy a whole package.

As we derive so much from vegetables, it behoves the traveller, and the philanthropist, to inquire and ascertain the properties of such as are in request in other countries, either for food or medicine, for the purpose of dying, or for mechanical or agricultural purposes; as practical information on these points may be of incalculable advantage.—In pursuing inquiries relative to grain, culinary or esculent vegetables, the times and seasons of planting, sowing and reaping, should be carefully ascertained, as from the want of information of this kind, we frequently lose the advantage that might otherwise accrue from the introduction of exotic plants. The particular soils and kinds of manure suitable or favourable to their increase, should also be noticed; as likewise what animals are particularly injurious to the crops, and what modes are adopted to prevent or repel their attacks.

The agricultural operations, of foreign countries, well merit the particular attention of the traveller, both with respect to the subjects cultivated, and to the purposes to which they are applicable; the quantities of seed apportioned to an acre of ground; the modes of sowing it; the average number of hands employed on any given quantity of land; the modes of weeding or cleaning the crops; of ploughing, harrowing, irrigating, scarrifying, and paring land, should likewise be ascertained; as also the plans of mowing, reaping, or otherwise collecting and housing the

crops, with the particular methods practiced for thrashing or freeing the various seeds from their husks or chaff, or for preparing any vegetable substances for manufacture, as hemp, flax, cotton, &c. Answers to these queries will with great probability be attended with advantage. As the introduction of a vegetable, of equal value with the potato, would form an object of the highest national importance. Travellers cannot more essentially serve their country, than by ascertaining the kinds, and procuring seeds or plants of the various culinary or esculent vegetables, in use in other countries, as by their introduction, an addition will be made to our present stock of foodful plants, which is of far greater importance than the introduction of a whole forest of tropical flowers; which though beautiful, and highly interesting, are still of comparatively trifling value. Of the timber trees common to other countries, their size, growth, maturity, and durability, should be ascertained, with the purposes to which, from the texture of the wood, they are applicable; if for ship timber, for building, for agricultural or domestic purposes; if capable of receiving a fine polish, or likely to be of use for the purpose of inlaying; if any dye is afforded; if the wood or bark is applied medicinally, and if so, how prepared, and administered; if they produce nuts or seeds, useable as food, or for the purpose of extracting oil; if the husk like that of the cocoa nut, is used for domestic purposes; whether pitch, tar, turpentine, rosin, or gums of any kind are naturally produced, or extracted; if they afford sugar, or from any natural or artificially caused exudation, a vinous or spiritous extract is afforded; numerous other queries of this nature will probably arise in the mind of the observing Naturalist, which he will do well to have resolved, enough having been said in this place, to turn his attention to these subjects.

As a considerable difficulty arises in determining the particular species of Tree, without specimens of the wood, (we do not mean botanically) small pieces should be obtained, cut to one size, say six inches, long, by three wide and thick, these being all of equal dimensions, will conveniently pack and be of sufficient magnitude to ascertain their qualities, particularly the ornamental kinds; when obtained, they should be suffered to dry gradually, and when perfectly so, may be coated over with varnish, which will mostly repel the attacks of insects.

Plants of peculiar interests, that are destined to be sent from abroad, should be chosen of small stature, in good health, and if practicable, should be inured to a greater variety of temperature, than in their natural state they are exposed to; these should be taken up with a ball of earth adhering to their roots and the ball enveloped in a thick coat of moss which should be tied over with pack-thread, or matting, as represented by the subjoined engraving; they may then be placed in a case of cut moss, this should be packed closely round the balls of earth, and covered over the tops of the roots two or three inches deep; the surface of the moss should be netted over with stout string or cord; the case may be placed on the deck of the vessel, in as airy a situation as possible, but where it is not likely to be splashed with the spray of the sea, as this, if it falls on the leaves or stems of the plants, is ve-

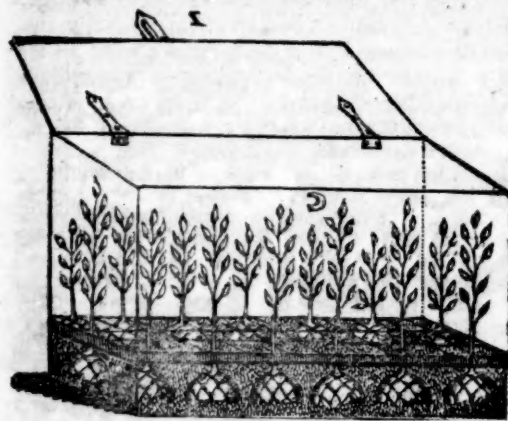
ry injurious, from the salts crystalizing in dry weather, and in the damp weather being decomposed by the humidity of the atmosphere: the case should have the two ends open, and covered with wire or strong netting, which as occasion requires, may be further sheltered by pieces of boards or canvas; the lid of the case should be made to shut like that of a common box; which in heavy rains, will prevent the plants from receiving a superabundance of water, and in dry, warm weather, will admit a large portion of air. As it is not at all times practicable, to get cases made in the form above recommended, a cask may easily be converted into a proper form for the conveyance of living plants.

In making drawings or descriptions of plants, the following particulars should be most carefully attended to. The form of the root, as fibrous, bulbous, tuberous, granulated or spindle shaped; the form of the stems or trunks of Trees; of stalks in herbaceous or shrubby plants; if they be simple or branched; smooth, woolly, or hairy; if the hairs incline upwards or downward; the shape and texture of the leaves, whether sessile, or furnished with foot stalks, whether they be simple or compound; if flat, cylindrical, concave, convex, smooth, rough, hairy, woolly, spinous, or furnished with tubular spines by which a poisonous fluid is discharged, as in the common Nettle; if the edges are entire or serrated, if surrounded by a margin; the position they grew in, should likewise be noticed, whether from the crown of the root, or from the trunk, stems, or stalks; if they grow singly or in pairs, threes, &c. or in whorls; their relative position one to another if opposite, alternate, or irregular; these particulars merit the closest attention, as they are those which often afford the best specific characters; if they be any Bractæe or flora leaves, if these differ in form or colour from the other leaves; the form, duration, texture, or absence of the Calix; as also the same particulars relative to the petals in the Corolla; the number, situation and form of the Stamens, Pistiles, Seed Vessel, and Seed; by attending to these much useful information, will naturally accrue, and the dissemination of the particular structure of the parts common to each plant, as growing in its native or wild state, will tend greatly to the removal of difficulties, with which many exotic species are encumbered.

The Philosophy of Botany, like that of every other branch of Natural History, does not consist in forming extensive collections, or in acquiring a scientific acquaintance with the nomenclature of the various species; but in ascertaining their uses, qualities, and relations as respects other subjects, and their own peculiar economy and history; it is these particulars that give interest to this and every other science, and are those that a true naturalist will ever have in view; in contemplating the varied productions of the fields or gardens, he will find nothing cloying, nothing affecting his passions, or causing those unpleasant feelings so often excited by the works of art, for truly, as Lord Bacon observed, "a garden is the purest of all human pleasures;" the wonderful variety evident in the botanical creation, in form, structure, colour, and economy, their powers of secretion of matter totally different from that from which they draw their nutriment; as sugars, salts, acids, bitters, &c. are all objects of admira-

tion, and powerfully bespeak the wisdom and providence of their all-wise Creator.

We annex the sketch of a Botanical register, of such particulars as should in all possible cases be obtained; we have done this without reference to any known species; but merely that the various particulars relative to the use to which different species are applicable, may not be omitted.



Present Prices of Country Produce

Ascertained by actual sales, within the last week.

LIVE STOCK.

Mr. Rusk purchased last week, two lots of fattened cattle, 20 each, from the South Branch of

Potomac, for \$8 50 per cwt. picked from droves of 35 to 36.

TOBACCO—A few hhds. Richmond, good quality, sold last week, by J. P. Pleasants & Son, for \$6 50; about 13 hhds. sold also, by Wm. McDonald & Son, for the same price.

Two crops of best quality, from near Benedict and Charlotte-Hall, in this state, sold on Wednesday, for \$10 and 12; corn, 60 to 62 1-2 cts. scarce; oats, 45 to 50 cts.; rye, 62 1-2 cts.; red wheat, \$1 10 to 1 12 1-2. This season is said to have been very prolific in garlic; by which the price of new crops is much affected; different parcels of the same cargo, have sold at various prices, from \$1 06 to 1 12, according as they were more or less exempt from garlic; some parcels have come up so full of it that they would not sell at all. The neat, well managing farmer, who takes the pains to clear his wheat of garlic, ought to be mindful, not to send it to market in bad company. White wheat, fit for baker's or family flour, \$1 20; wool cards, No. 5, 50 cts. per pair; No. 6, 62 1-2 cts.; cotton cards, 75 cts. Hay, \$16 to 17. Straw, \$12 to 13. Bacon, the hog round, 12 to 13 cts. Butcher's beef, best pieces, 10 to 12 1/2 cts. Chickens, per dozen, \$2 50 to \$3. Veal, 10 to 12 cts. Mutton, 6 to 8 cts. Salt beef, prime pieces, 10 cts. Pork, 8 to 10 cts. Eggs, per dozen, 25 cts. Potatoes, new crop, 37 to 50 cts. per peck. Butter, per lb. 30 to 37 cts. Connecticut cheese, best quality, from the boats, 10 cts.

retail. Herrings, retail, per bbl. \$3; quantity, \$2 75; do. do. No. 2, \$2 50 to 2 25. Shad, untrimmed, per bbl. retail, \$6 50. Tar, per bbl. by the cargo, \$1 50. Rosin, \$2. Pitch, \$2 75 cts. scarce. Susquehanna pork, first quality, retail, \$16. Boston beef, No. 2, \$12. North Carolina bundle shingles, the run and average quality, \$4 to 4 50 per M. Currituck, do. from \$6 to 8, according to the width.

If any of his subscribers would like to have any other articles reported, the Editor of the *American Farmer*, will thank them to let him know.

FROM THE ALEXANDRIA TELESCOPE.

Molly O'Shea.

ON the moor round the cot of my fathers I roam,
When the last beam of day-light is quench'd in the sea,
And I hie to my dear little cabin at home,
Once the cabin of pleasure to Molly and me.
The red-tinted cloud in the evening sky,
Blushes bright as it hies from the court of the day:
But all its soft sun-painted hues cannot vie
With the bloom that once glow'd on sweet Molly O'Shea.
But the wind of the winter has blighted my flower,
And shaken my bud from its fostering tree:
And now the straw cabin, and green sunny bower,
Have lost all their fondest endearments to me.
Then I will away to her rose planted grave,
When twilight has fluttered unnoticed away,
And long the dear shamrock of Erin shall wave,
On the green turf that covers sweet Molly O'Shea.
MONTALDO.

1819

MEMORANDUM.

We found a species of evergreen oak in abundance, growing on the sides of most of the hills. It seldom exceeds ten or twelve feet in height, and four inches in girth at the base of the trunk; the leaves were thickly beset with small red galls, each of which contained several small insects; the galls seemed from their astringent taste, likely to answer the purpose of common oak galls, as, though very small they are produced in great abundance. The acorns scarcely exceed a horse bean in size, and grow in clusters; the natives burn the small twigs and leaves, which diffuse a very agreeable scent while burning; the wood is hard and beautifully veined, and though of a small size, it is well calculated for the purpose of veneering. Specimen of the wood in case A. No. 146.

May 23.	July 24.	Aug. 29.	Specimens of the wood, case B. No. 29.			
			Leaves appear in March, flowers in April, and the fruit ripens in August and September.	It frequently acquires the height of 60 to 80 feet before branching, and is in girth from 8 to 12 feet.	Its duration is about 40 to 50 years, after which time it rapidly decays.	The natives use the smaller branches for fuel, but the trunks of the full grown trees they frequently hollow out for the purpose of canoes, these they cover with skins, and smear over with the oil which they obtain from the nuts.
A very elegant tree grew on all the hills, which we found much frequented by squirrels, and other small quadrupeds.	The wood seemed likely to be valuable for buildings, and domestic purposes; as it was hard, close grained and light.	It produces a small nut, enclosed in a hard shell, from which an oil is expressed, for the purpose of burning, the kernel is sweet and is eaten by the natives.	Grows most luxuriantly, in a dry, gravelly loam; such as grew near the sea, were much stunted, their fruit was harder, and the husks produced less oil.			

After the dry season had passed, the rapidity with which vegetation advanced, was almost beyond belief; spots, which only two or three days before, were like dry, barren heaths, were now covered with a beautiful verdure, and within a week of the first rains, numerous species of flowers were in bloom, where ten days before not a solitary leaf was to be seen. In our walks at this time we met with a great variety of Orchideous plants, the roots of which were either palmated or bulbous, and possessed the flavour common to the European bulbous rooted kinds.

May 23.	July 24.	Aug. 29.	Seed in case iv. No. 19; case xi. No. 25; and case xix. No. 224.			
			First appears in February, and flowers in March and April; disappears in June, reappears in August, flowers in September, and disappears again in December.	Belongs to class iii. Order 1.	Three or four feet high.	It is perennial and herbaceous, and produces two crops in a year.
We met with a grass of the most luxuriant foliage; its taste was sweet, the leaves tender and juicy, and seeming admirably calculated for agricultural purposes.	It grows to the height of three to four feet with abundance of leaves at the root and on the stem; numerous herds of Buffaloes, Deer, and other animals, resort to the places where it abounds, these all avoid eating the stems.	The natives generally when on their journeys, erect their huts where this grass is in abundance, as it supplies their cattle with plentifully; they boil the stems and when the liquor is cold, pour it off, it having acquired a sweetish taste, and it is the only prepared drink we ever saw them use.	In hilly districts, low marshes, valleys that are often overflowed, and on mountains that are quite destitute of water, this grass is to be found, it is less luxuriant in the latter places, but it is generally dispersed.	It produces abundance of seed, and also grows readily from partings of the roots.		

THE FARMER.

BALTIMORE, FRIDAY, JULY 30, 1819.

NOTICE TO SUBSCRIBERS.

Those persons who receive this paper in lieu of the *Maryland Censor*, are again reminded, that unless all arrears are paid up prior to the 19th day of August next, the *American Farmer* will be discontinued on that day—and the accounts put into the hands of Agents to collect. The Editor offers, however, to give a receipt in full of all demands, to those who have not paid, provided they will return to him, in good order, all the numbers they have received of the *American Farmer*.

Those who have paid for the *Censor*, are notified, that if they wish to have the *Farmer* continued, it will be necessary to pay the half year at least, that is \$2 in advance, before their present year's subscription expires.

The *American Farmer* is invariably paid for in advance; nor will its present Editor continue it for one day on any other principle. He devotes all the leisure time he can rightfully gain from paramount official duties, to make the *Farmer* worthy of public encouragement, and if any subscriber has been disappointed in his expectations as to the value of the work, the Editor once more offers to receive his file and pay back his money. Here again the request is repeated that if any subscriber shall not have received any particular number, he will make it known, and he shall be forthwith supplied.

LAWLER WHEAT.

On most agricultural subjects, particularly the cultivation of small grain, few persons have it in their power to speak with more confidence and accuracy than Col. LLOYD. For, to say nothing of his well known personal industry, and his habit of minute observation the immense extent of his possessions throws open a boundless field for experiment. His usual crop of grain per ann. is upwards of 20,000 bushels. Knowing that he had made some specific trials of the Lawler wheat, of which so much was said a few years since in the papers, we solicited the favour of him to inform us what he had observed respecting it; his politeness has enabled us to lay before the readers of the *American Farmer*, his letter, which may be considered conclusive as to its properties at least, in relation to this district of country.

CHILE WHEAT.

We hope in a short time to gather, from various gentlemen, the result of experiments made with small samples of the CHILE WHEAT. It has been noticed by a farmer in Virginia, in very favourable terms—he seems to consider it a very valuable acquisition to our stock of small grain; but as far as we have heard or seen the fruit of small quantities sowed in this neighbourhood, the result is not so encouraging. It seems to have lost its colour, and the grains are not so plump, and thoroughly filled, as the original stock.

The very late period at which it was sowed, and the dry weather, about the time of ripening, have been unfavourable to a fair development of its properties. In the extraordinary thickness and solidity of the stalk, it is very remarkable, giving it, perhaps, the power of more effectually resisting the attacks of the fly. The shape of the head is altogether sin-

gular, but we forbear to express an opinion prematurely as to its qualities.

From the *American Watchman*.

MR. PRINTER, I make no doubt but the charitable and humane object, which the writer hereof has in view will induce you to give the following an insertion in your valuable paper:

I have a child, two years and six months old, who has been in a very uncommon degree afflicted with the bowel or summer complaint; and after trying in vain the various prescriptions of the physicians, I was advised by an old lady, my neighbour, to try a tea, made of the inner rind, or bark of the black oak; which was administered to the child in the quantity of a table spoon full three times a day; and which has performed a perfect cure in three days. I recommend it to mothers to do likewise. Respectfully,

A MOTHER.

N. B. The tea should be sweetened with a little sugar.

We have been confidently assured from the most respectable source, and desired to publish the fact, that what is called the summer complaint, may be cured with gun powder—a tea-spoonful pulverized, and taken with a little water.—Ed. Am. Farmer.

To Southern Millers.

MR. EDITOR—I have heard much of the rapid grinding of mills at the South, and should be pleased to state, through the medium of your paper, that I can grind 100 bushels of wheat well, in 12 hours, with Town's Patent Water Wheel, carrying one pair light four foot stones, with one foot water under seven foot head. Will any Southern mill owner inform me how much better he can do?

A VERMONT MILLER.

Boston Palladium.

We understand, that thirty bags of saintfoin, (holy hay) seed, have just arrived in this market from France.

DIED.

At Eddyville, Ky. June 23d, 1819 of a pulmonary complaint, contracted on the Canadian frontiers, Dr. HENRY SKINNER, late a surgeon in the army of the U. States, in the 34th year of his age. His loss is much regretted by his friends and acquaintances not only on account of his skill and usefulness as a medical character but on account of his patriotism, his urbanity and manly virtues. He was the companion of the gallant Croghan in the memorable defence of Fort Stephens, at Lower Sandusky. He has left a disconsolate widow and two children, and a host of relatives and friends to mourn his early death. Kentucky Reporter.

[Dr. SKINNER was a native of Calvert county, in Maryland—eldest son of the late Frederick Skinner, and eldest brother of the Post Master of Baltimore. He studied physic under the late Dr. John Crawford, and it is no small compliment to say, what may be said with truth, that in a spirit of universal philanthropy and benevolence of heart, he resembled his worthy preceptor.

He maintained through life, a course of unspotted honour and integrity; and the writer of this, who knew him thoroughly, takes consolation from the reflection, that he died with that fearless composure and dignity, which may be expected from those, who in their last hour, feel that their part, whether humble or exalted, has been well performed, and that they can be reproached with nothing which can dishonour their name, their friends or their country.]

THE WIFE.

In giving our readers the exquisitely fine picture of "A WIFE," from the first number of GEORGE CRAYTON, a new work by Mr. ERVING, we are perhaps taking an unwarrantable liberty with the holder of the copy right. It is, however, apprehended, that it may serve to aid, rather than circumscribe the circulation of the work, otherwise we should not have taken the freedom to copy so largely from it, much as we are pleased to hold upon

so beautiful a model to our fair country women. There are no individuals in the whole circle of society, to whom the hardness of the times makes a more forceable appeal, than to the wives of our bosoms, the mothers of our children, our partners in difficulties and privations.—It is in their fortitude and resignation, in a great degree, that the husband must look for consolation and support.

ACCOUNT OF TOPHAM, THE STRONG MAN.

From the *British Review*.

We learn from private accounts, well attested, that Thomas Topham, a man who kept a public house at Islington, performed surprising feats of strength; as breaking a broomstick of the first magnitude, by striking it against his bare arm; lifting two hogheads of water; heaving his horse over the turnpike gate; carrying the beam of a house as the soldier does his firelock, &c. But, however, belief might stagger, she soon recovered herself, when this second Sampson appeared at Derby, as a performer in public, at a shilling each. Upon application to Alderman Cooper, for leave to exhibit, the magistrate was surprised at the feats he proposed; and as his appearance was like that of other men, he requested him to strip, that he might examine whether he was made like them; but he was found to be extremely muscular. What were hollows under the arms and hams of others, were filled with ligaments in him.

He appeared near five feet ten, turned of thirty, well made, but nothing singular; he walked with a small limp. He had formerly laid a wager, the usual decider of disputes, that three horses could not draw him from a post which he should clasp with his feet; but the driver giving them a sudden lash turned them aside, and the unexpected jerk had broke his thigh.

The performances of this wonderful man, in whom were united the strength of twelve, were rolling up a pewter dish of seven pounds, as a man rolls up a sheet of paper—holding a pewter quart at arm's length, and squeezing the sides together like an egg-shell—lifting two hundred with his little finger, and moving it gently over his head. The bodies he touched seemed to have lost their gravitation. He also broke a rope fastened to the floor, that would sustain twenty hundred weight—lifted an oak table six feet long with his teeth, though half a hundred weight was hung to the extremity; a piece of leather was fixed at one end for his teeth to hold, two of the feet stood upon his knees, and he raised the end with the weight higher than that in his mouth—he took Mr. Chambers, vicar of all saints, who weighed 27 stone, and raised him with one hand—his head being laid on one chair, and his feet on another; four people, 14 stone each, sat upon his body, which he heaved at pleasure—he struck a round bar of iron, one inch diameter, against his naked arm, and at one stroke bent it like a bow. Weakness and feeling seemed fled together.

Being a master of music, he entertained the company with *Mad Tom*. I heard him sing a solo to the organ in St. Warburgh's Church then the only one in Derby; but though he might perform with judgment, yet the voice, more terrible than sweet, scarcely seemed human. Though of a pacific, temper, and with the appearance of a gentleman, yet he was liable to the insults of the rude. The hostler at the Virgin inn, where he resided, having given him disgust, he took one of the kitchen spits from the mantelpiece, and bent it round his neck like a handkerchief; but as he did not choose to tuck the end in the hostler's bosom, the cumbrous ornament excited the laugh of the company till he condescended to untie his iron cravat. Had he not abounded with good-nature, the men might have been in fear for the safety of their persons, and the women for that of their pewter shelves, as he could instantly roll up both.—One blow with his fist would for ever have silenced those heroes of the bear-garden, John-son and Mendoza.